



**pennsylvania**

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SECRETARY

November 9, 2011

Environmental Protection Agency  
Hazardous and Solid Waste Management System:  
Identification and Listing of Special Wastes;  
Disposal of Coal Combustion Residuals from Electric Utilities:  
Notice of Data Availability and Request for Comment  
Mailcode: 28221T  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Attention: Docket ID No. EPA-HA-RCRA-2011-0392

The Commonwealth of Pennsylvania, Department of Environmental Protection (DEP), offers the following remarks and enclosures for consideration and inclusion in the record regarding EPA's October 12, 2011, Notice of Data Availability (NODA) and Request for Comment regarding the management of Coal Combustion Residual Wastes.

To reiterate DEP's comments submitted to EPA previously on April 10, 2009, and November 19, 2010, and in correspondence to the Pennsylvania delegation on October 13, 2011, there is no scientific or technical basis for broadly classifying coal ash residue as hazardous waste. It is a fact that, with rare exception, coal ash passes the Toxicity Characteristic Leaching Procedure (TCLP) test, which is the demarcation test for determining whether a waste is a "hazardous waste."

The issue of whether coal ash waste should be regulated as hazardous waste has been researched and evaluated at least four times before by EPA, and EPA concluded each time that it should not be regulated as such. The safety of coal ash was studied in 2000 by the Clinton Administration and it determined that coal ash should not be designated as a "hazardous waste." Since then, EPA has calculated that ash recycling by the cement and concrete industry alone has reduced carbon emissions by 117 million tons. Groups as diverse as the United States Conference of Mayors, the National Governors Association, the Environmental Council of the States, labor unions, the American Society for Testing and Materials, 30 states, and a bipartisan group of 74 members of Congress have previously opposed regulating coal ash as hazardous waste and have pointed out to EPA that the evidence and the science shows that it would be inappropriate to classify coal ash waste as hazardous waste. Other federal agencies including the Department of Energy, Department of Transportation, Small Business Administration, and the Army Corps of Engineers have reached the same conclusion.

We know that the level of public awareness on coal ash rose with the Tennessee Valley Authority coal ash impoundment failure in 2008. This might be the reason for EPA's "rush" toward making all coal ash everywhere "hazardous waste" and brought under EPA's sole

governance. However, Pennsylvania reacted quickly and decisively to the event. DEP strengthened the applicable sections of our residual waste regulations in new Chapter 290 to provide for additional water quality monitoring, the establishment of chemical (leachate) and physical standards and a procedure for qualifying ash for reclamation use, which we had done previously by policy.

Pennsylvania's experience is a testament to how well and how responsively the individual states can and do regulate in this area. Indeed, as Pennsylvania's experience with Chapter 290 demonstrates, the states are better and more agile at doing so than is the federal government, which is one of the main underpinnings of HR 2273 recently passed by the House of Representatives. HR2273 would provide general management guidelines under which states would be able to implement environmentally protective programs that meet individual state needs, a much better approach than designating a non-hazardous material a hazardous waste.

Pennsylvania's early comments filed in response to EPA's rush to label coal ash residue as "hazardous waste" bear repeating here. The DEP specifically commented on November 19, 2010, to EPA's proposal by saying:

- The broad classification and regulation of coal combustion residuals (CCRs) as hazardous waste is not supported by science;
- The regulation of CCRs as hazardous waste is unnecessary, as none of these wastes generated by Pennsylvania power plants have been observed exhibiting characteristics of hazardous waste;
- Classification of CCRs as hazardous waste would have a chilling effect on its beneficial use, potentially ending that practice with no tangible increase in environmental protection;
- Pennsylvania has no commercial permitted hazardous waste disposal facilities at this time; therefore, all CCRs generated in Pennsylvania would need to be transported to other states for disposal, causing the power industry to incur significant costs for transportation and disposal; and
- If CCRs would be classified as hazardous waste, it would result in a detrimental economic impact to Pennsylvania, leading to higher electricity production costs for industry and increases in electricity costs for every business and citizen of the Commonwealth.

Pennsylvania was not alone. More than 30 states provided comments opposing a hazardous waste designation, citing environmental and economic reasons.

Specific to the October 12, 2011, NODA, DEP has carefully reviewed the following reports identified for comment:

- *Out of Control: Mounting Damages from Coal Ash Sites*, Environmental Integrity Project and EarthJustice, February 24, 2010, and

- *In Harm's Way: Lack of Federal Coal Ash Regulations Endangers Americans and Their Environment*, Environmental Integrity Project, EarthJustice and Sierra Club, August 26, 2010.

Generally DEP believes those reports mischaracterize the issue and stretch the data to come to unfounded conclusions regarding the cause, effects and alleged impacts from the identified facilities. The authors are quick to assess blame on present coal ash management practices while ignoring the legacy of historical coal mining and past ash management practices. Further, the authors confuse readers and themselves by comparing data related to ongoing remedial action and cleanup actions to new coal ash management practices. Our overview and detailed rebuttals to those reports are attached.

The NODA also listed the following document for comment:

- *Comments of EarthJustice, Environmental Integrity Project, Sierra Club, Natural Resources Defense Council, Southern Alliance for Clean Energy, Southern Environmental Law Center, Physicians for Social Responsibility*, November 19, 2010.

While the time allotted for comments to the NODA (30 days) did not allow for detailed review of all the identified state programs in those comments, DEP notes that the report also contains many of the same allegations as the previous two reports identified in this letter. Please be advised that our enclosed rebuttals also serve as commentary on those comments contained in the November 19, 2010, comments submitted by EarthJustice, et al.

The EPA NODA solicited comments on chemical constituent data on CCRs submitted from 16 commentators. In the short time provided by the NODA, DEP was able to review the following four ash chemistry reports:

- *The Michigan Department of Natural Resources and Environment, summary table of TCLP data "Leach Results from Evaluation of Ninety Coal Combustion Residuals Samples"*
- *Electric Power Research Institute (EPRI) Report 1012578 "Characterization of Field Leachates at Coal Combustion Product Management Sites: Arsenic, Selenium, Chromium, and Mercury Speciation"*
- *The American Coal Ash Association (ACAA), "Leachability of Trace Metal Elements from Fly Ashes and from Concrete Incorporating Fly Ashes"*
- *The American Coal Ash Association (ACAA), "Comparative Leaching of Midwestern Coal Fly Ash and Cements"*

The Michigan report provided ranges of data for 90 CCR samples. With the exception of selenium, all parameters were more than an order of magnitude lower than the characteristic toxic limit. The highest measured selenium concentration was less than half the toxic limit. Thus, no ash sample exhibited chemical characteristics indicative of toxic materials.

The EPRI study looked at field water quality data from 29 coal combustion product management facilities. A total of 81 samples were evaluated. Seventy-eight analyses were at least an order of magnitude lower than hazardous waste concentrations. Three samples, from two sites, exceeded the hazardous waste values for chromium and selenium. In each instant the ash was from sub-bituminous coals.

The first referenced ACAA report documented nine fly ashes that were evaluated by the TCLP method. None exceeded the EPA hazardous waste criteria. Most parameters were one or more orders of magnitude less than the EPA hazardous criteria.

The other referenced ACAA report documented the analysis of four cements and four fly ashes by two variants of the TCLP test and a "synthetic groundwater leaching procedure," which was very similar to the SPLP test. All coal ash leaching results were well below toxic thresholds.

These reports are very consistent with and clearly support Pennsylvania's analysis of coal ash. The DEP has collected over 1,500 coal ash sample analyses for beneficial use at mines. Over the past 30 years only one ash source has been rejected because a parameter exceeded a toxic waste limit, an ash from a South American coal source that was being burned at a New York power plant. As found in the studies reviewed above, coal ash leaching results are typically at least an order of magnitude less than the toxic limits.

Adequate testing, as is done in Pennsylvania, can safely and accurately identify the few and far-between coal ashes that may contain hazardous concentrations of an element. Those rare ashes that do exceed toxic limits can be identified and managed appropriately. It needs to be emphasized that with over 1,500 detailed chemical analyses of ashes produced from Pennsylvania anthracite or bituminous coals destined for beneficial use at mines, none has been identified as hazardous.

Beyond the immediate comments regarding the NODA, DEP must again draw your attention to the larger environmental and economic concerns we have here in Pennsylvania. Although some believe the designation of coal ash as a hazardous waste would spur recycling and reuse, we find that concept counter intuitive and illogical. We believe such a designation would clearly adversely affect and potentially block the use of coal ash for beneficial reuse for such uses as, among other things, abandoned mine reclamation.

Simply stated, EPA's designation of coal residue as hazardous would put an end to the use of coal residue for abandoned mine reclamation projects. That would be devastating to the Commonwealth. We in Pennsylvania have a long history of using coal ash residue for mine reclamation. Pennsylvania carries the nation's heaviest burden of abandoned mines, with the

attendant health and safety problems that come with abandoned mines including water-filled pits, dangerous highwalls, open shafts, coal waste piles, acidic mine drainage and subsidence features.

There are more than 5,000 abandoned, un-reclaimed mine problem areas encompassing more than 190,000 acres in the Commonwealth. The beneficial use of coal ash, when properly managed, tested and monitored, has proven to be an effective means of reclaiming abandoned mines and addressing water pollution, and the beneficial use of coal ash is a seminal part of our programs.

Pennsylvania averages about 70 active sites each year with approximately 10 million tons of ash being used statewide for coal mine reclamation. The reclamation of these sites is being completed at no or minimal cost to the Commonwealth. If the sites are not reclaimed with ash, the majority are historic sites with no responsible party. The burden to reclaim the site, including financially, would then fall to the Commonwealth. If the ash is not used in reclamation, which is a proven safe use, it would have to be landfilled, which would mean finding space for 10 million tons of additional coal ash each year.

The DEP must also note the severe economic burden that would be placed on the Commonwealth and its citizens should coal ash become a hazardous waste. A June 2011 Veritas Economic Consulting report states that classifying coal ash waste as hazardous waste would result in the loss of 183,000 to 316,000 jobs nationwide and cost between \$78.9 billion and \$110 billion over the next 20 years. In addition, the Electric Power Research Institute has said that declaring coal ash as a hazardous waste would shut down hundreds of power plants and logically result in the loss of countless employment opportunities in an already stressed economy.

In conclusion, DEP urges EPA to carefully consider the full extent of the comments offered herein and by others as well as the benefits that effective state programs can provide to ensure the safe and effective use of this resource. Further, it is important as illustrated by our comments that present policy be developed in recognition of the entire body of relevant data and practices rather than on practices of past generations. Finally, placing the label of hazardous waste on coal ash is simply not warranted or justified by the body of scientific data presented nor is such a designation in the interest of national public policy.

Sincerely,



Michael L. Krancer  
Secretary

Enclosures (4):

Overview of reports issued by the Environmental Integrity Project regarding coal combustion waste disposal impoundments in Pennsylvania

DEP's Review of Environmental Integrity Project and Earthjustice Reports:

- UGI Hunlock and Portland facilities (NERO)
- Mitchell, Phillips, Seward, and Fern Valley facilities (SWRO)
- Little Blue Run and Hatfield's Ferry facilities (SWRO)